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	V2.0	High	27

Fun2 Electrical and Electronic Technology

VR Instruction V2.0

User and Customer Service Manual

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1. Introduction

1.1 Purpose

This guide is intended to help readers learn how to use this software.

1.2 Context

This software is proposed and developed all by Jiangxi KMAX Industrial Co., Ltd.

1.3 Definition

Term	Definition
zSpace	zSpace refers to zSpace all-in-one computers and laptops with AR and VR capabilities developed by zSpace,Inc.
VR	Virtual reality technology

1.4 Reference

Basic Electrician by Machinery Industry Press

Electrical and Electronic Technology by Publishing House of Electronics Industry

2 Features

2.1 Function

The electrical and electronic technology software is based on Basic Electrician and Electrical and electronic technology as the theoretical framework of the basics, and through the combination of text and VR models, animations, and interactions, it demonstrates concepts and principles that are not easy for students to understand. The software is based on the requirements of electrical basic teaching courses, and teachers can select resources to use according to their needs.

2.2 Performance

This software can run continuously and stably for 12 hours without any failure.

3 Operation Environment

3.1 Hardware Requirements

zSpace laptops, zSpace300 and other zSpace products with higher specifications. Performance parameters:

Specifications of zSpace300	
Display	24” HD Display (1920x1080) with zSpace head tracked stereo display technology
Processor	Intel i3
Memory	8 GB DDR4 RAM
Graphics	Radeon Pro WX3100 Embedded GPU
Peripherals	zSpace Stylus, zSpace Eyewear (Passive Stereo glasses and 2D conversion glasses), Keyboard and Mouse

3.2 Software Requirements

This software runs on zSpace all-in-one computers and laptops with Windows 10 operating system.

4 Getting Started

4.1 Installation

4.1.1 Client Deployment

Double-click the executable file, and install it by following prompt steps.

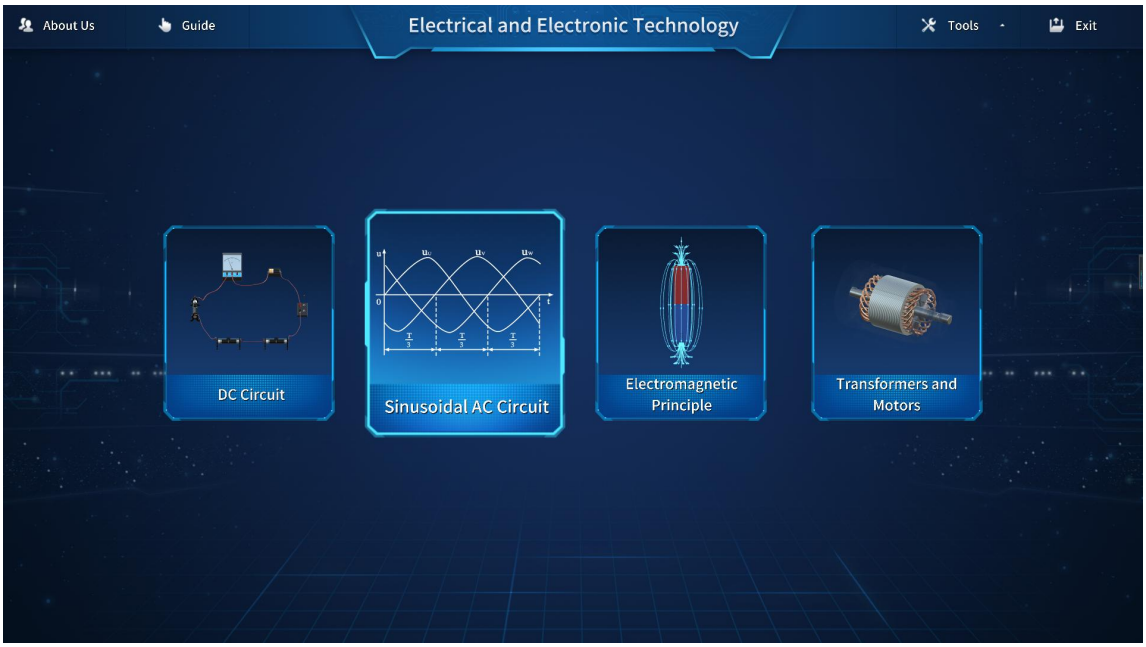
4.1.2 Product Registration

After the software is started and a registration window pops up, please enter an activation code issued by Jiangxi KMAX Industrial Co., Ltd. into the product key blank. Click the activation button to activate and use this software.

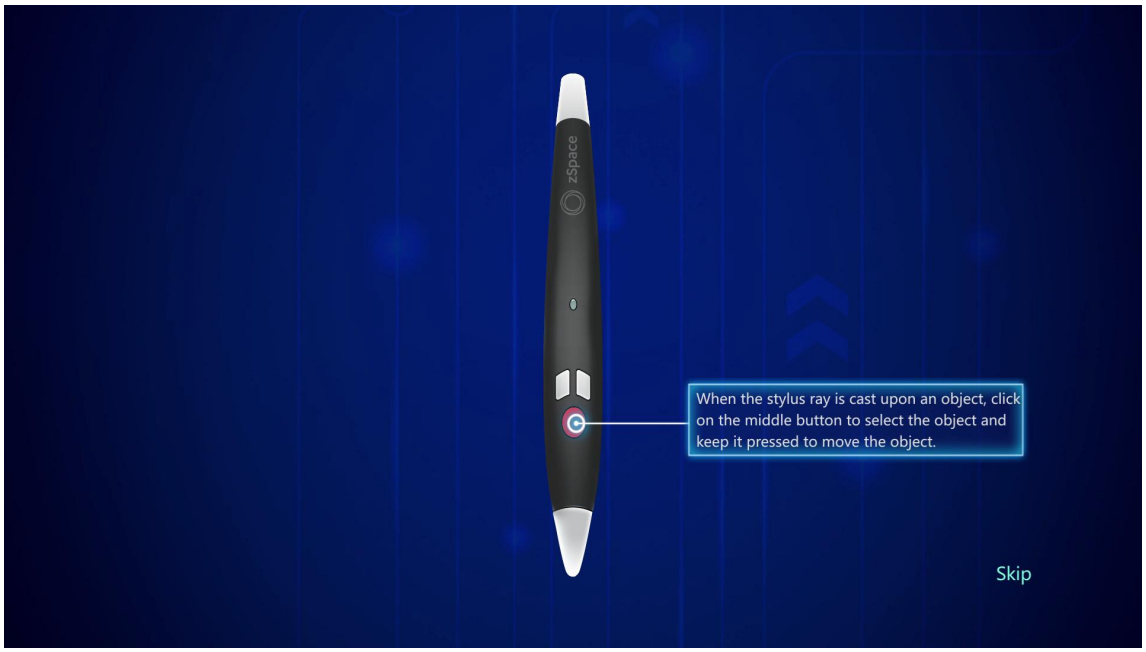
4.2 How to Interact

4.2.1 Home Page

Click the desktop icon of this software to enter the home page. On the top are the icons for About Us, Guide, Tools and Exit.



Click the guide button to view the guide introducing the basic operation of the ray pen.



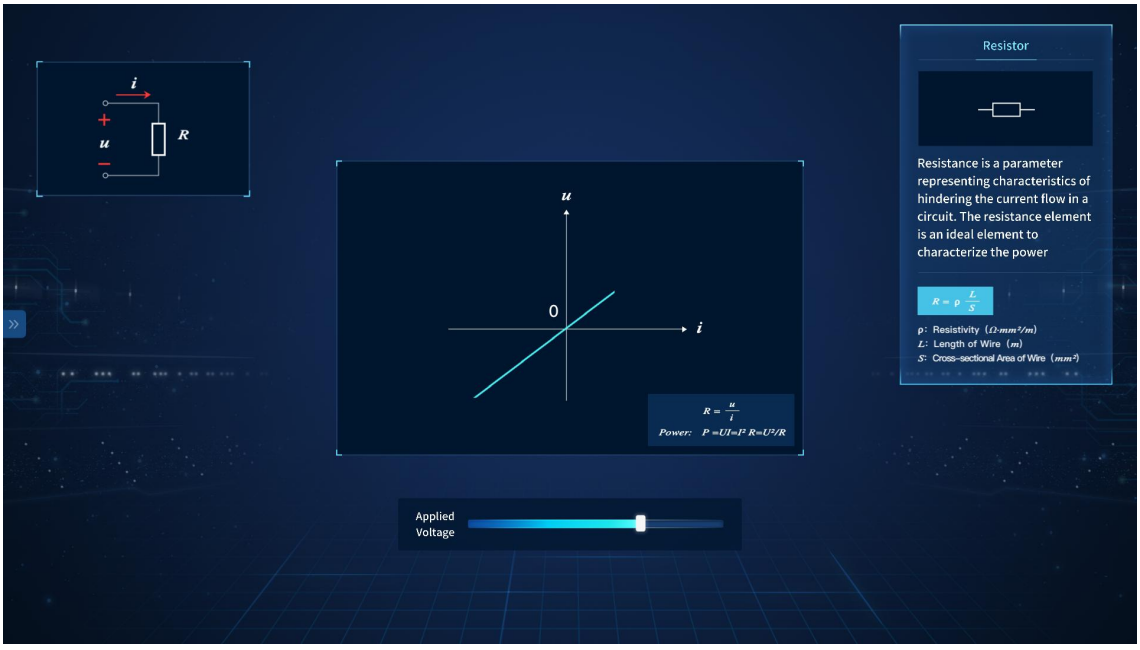
Click the tool button to pop up a drop-down menu. click the zView button to activate zView function, click the 3D TV button to connect with a 3D TV, and click the Settings button to set language, vibration of stylus pen and pupillary distance and check license information.

4.2.2 Enter Modules

Click the corresponding module button on the first interface to enter the module interface. The left is the classification menu; the middle is the model animation area; the upper right is the knowledge point text area; the lower middle is the operation button. Click the left menu back button to return to the first interface.

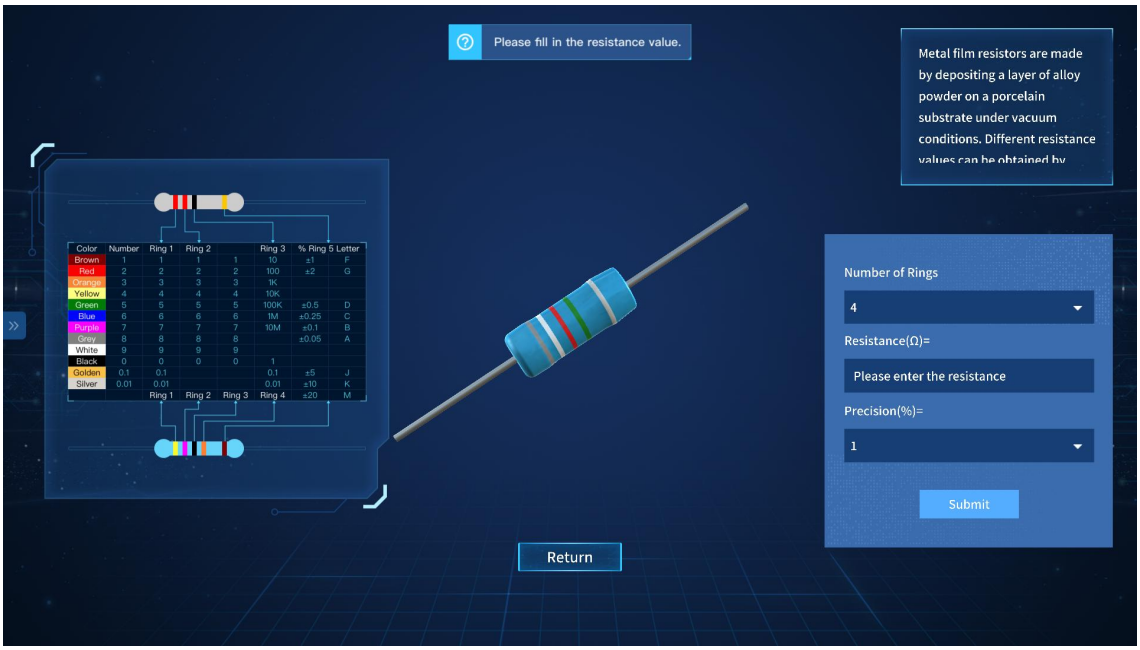
DC circuit module

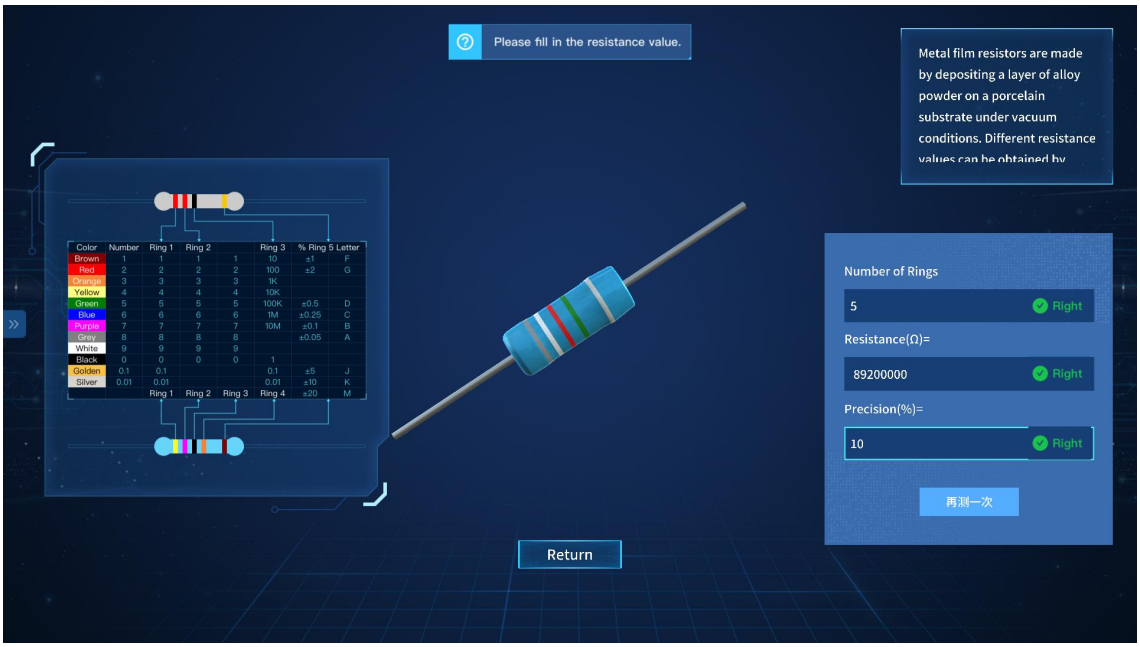
(1) Drag the progress bar by pressing the middle button of the stylus ray pen.



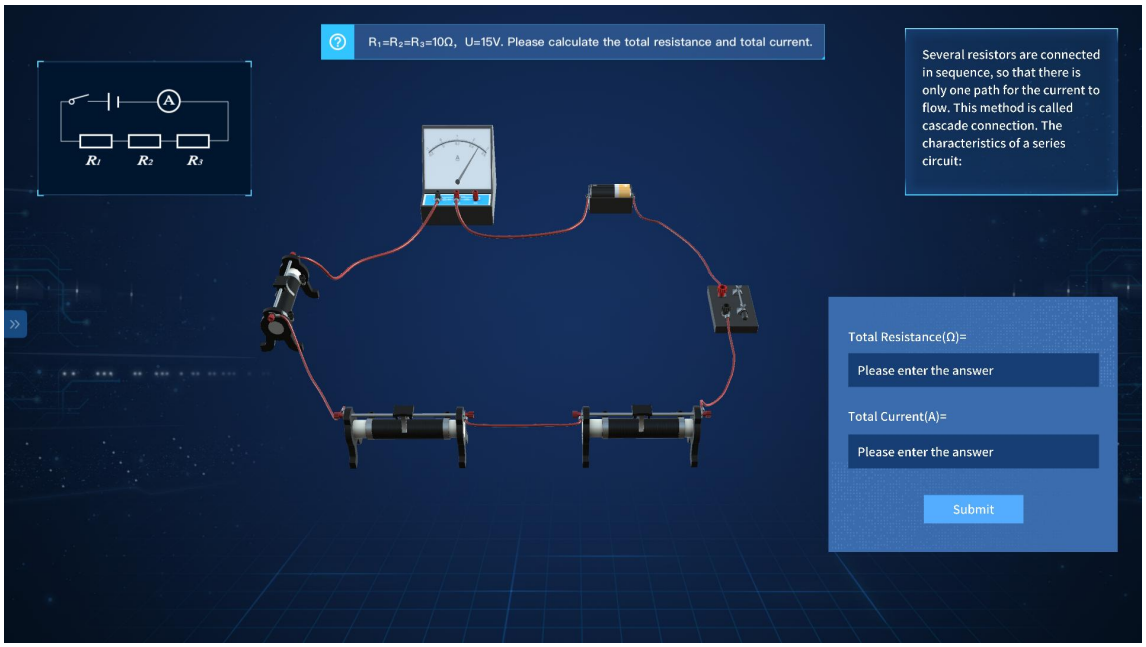
(2) Enter the resistance and precision, and click submit.

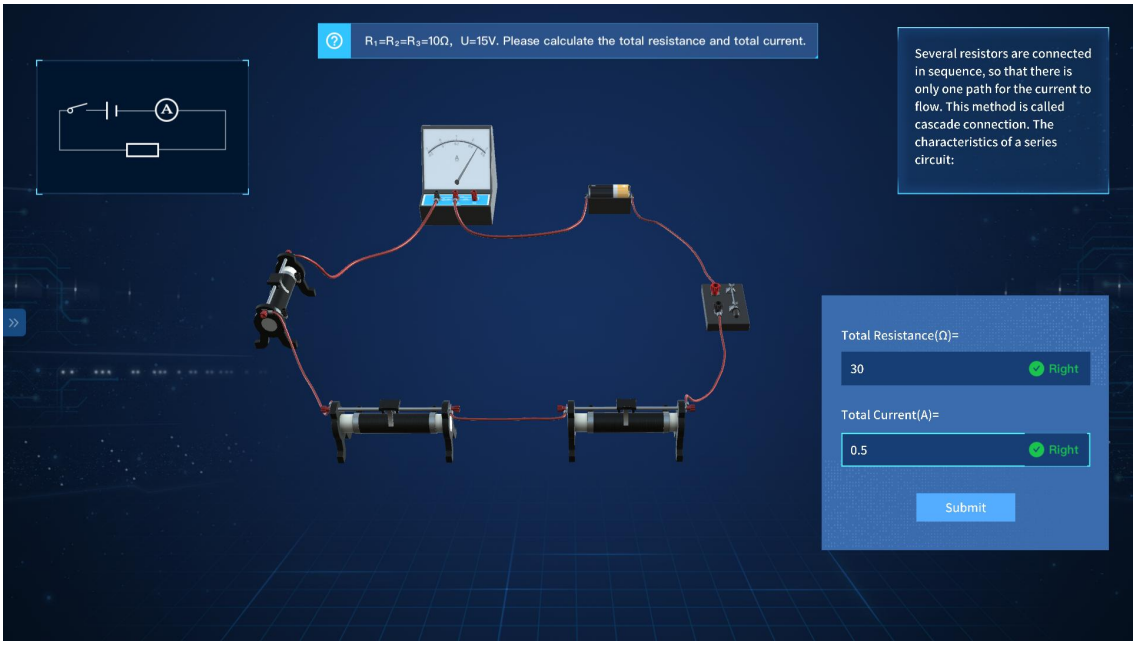
(3) According to the form on the left, fill in the number of rings, resistance value and precision value, and click submit.



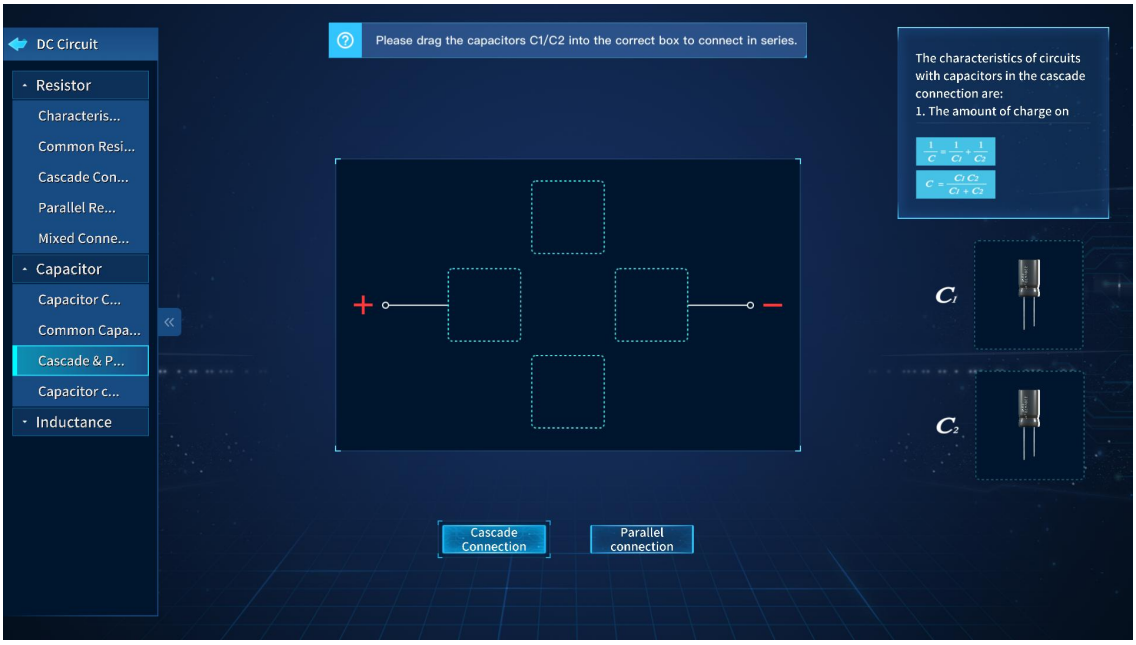


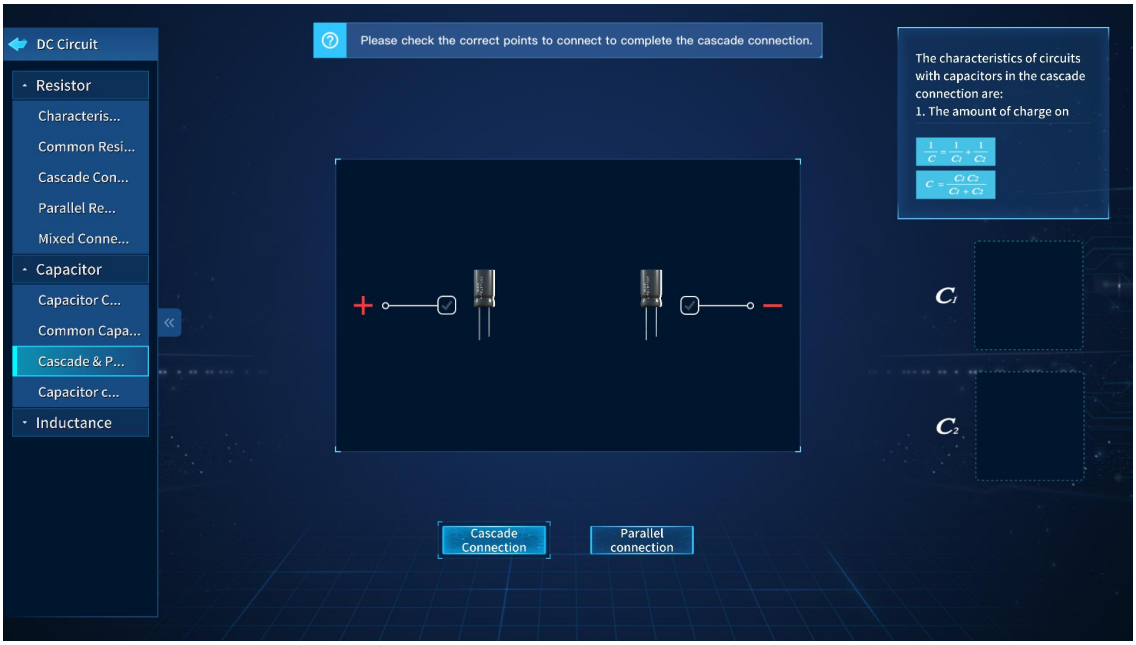
(4) Click the ports on both ends of components to connect first, then close the switch, and finally fill in the total resistance and total current to submit.

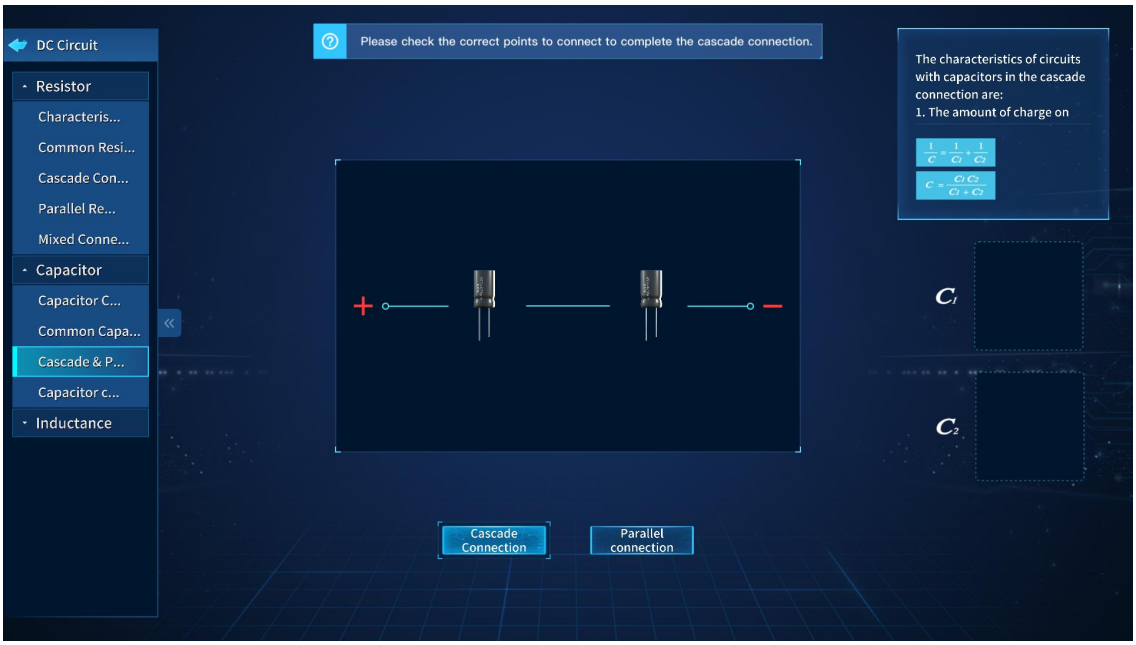




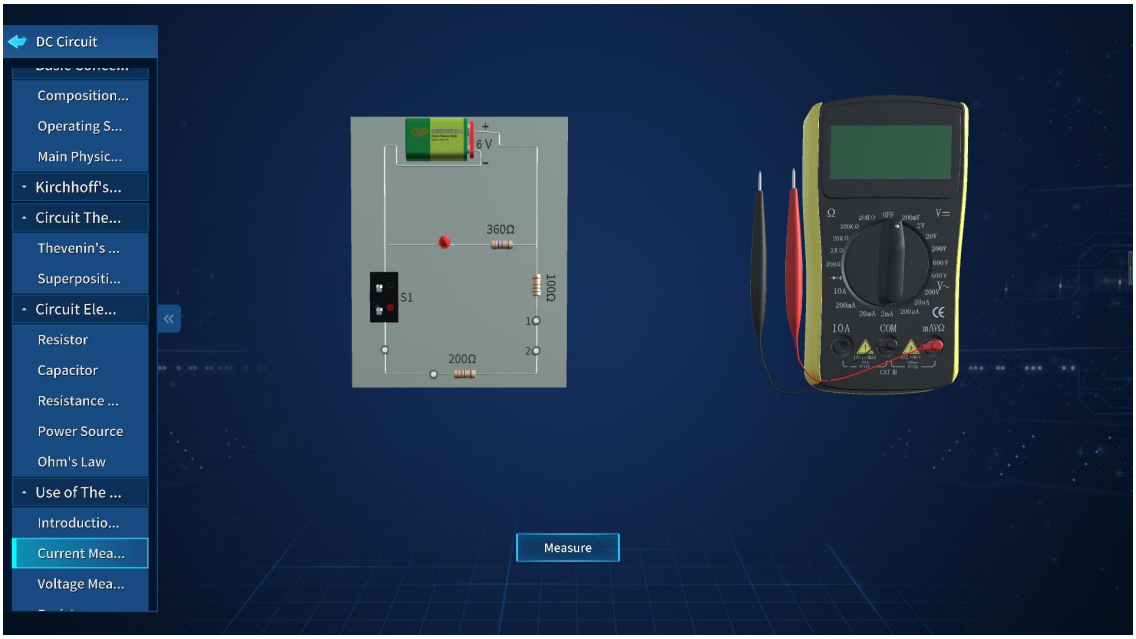
(5) First drag the component from the inventory on the right to the dotted box, and then click the checked box to connect.

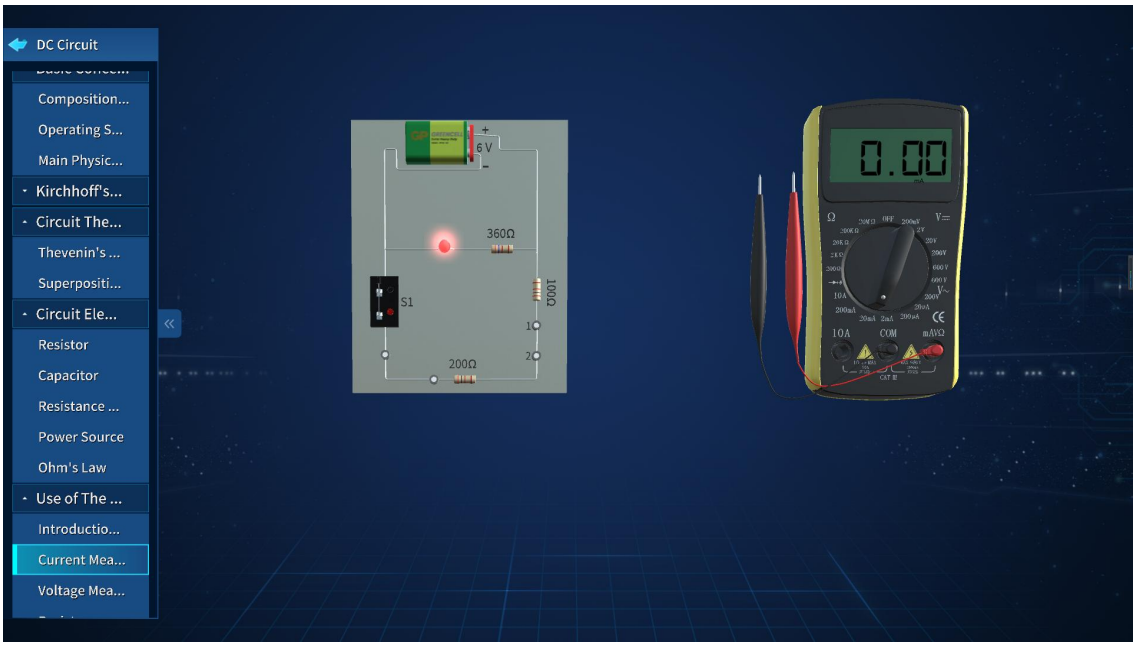

DC Circuit
Resistor
Characteris...
Common Resi...
Cascade Con...
Parallel Re...
Mixed Conne...
Capacitor
Capacitor C...
Common Capa...
Cascade & P...
Capacitor c...
Inductance
Please drag the capacitors C1/C2 into the correct box to connect in series.
The characteristics of circuits with capacitors in the cascade connection are:
1. The amount of charge on
C1
C2
Cascade Connection
Parallel connection

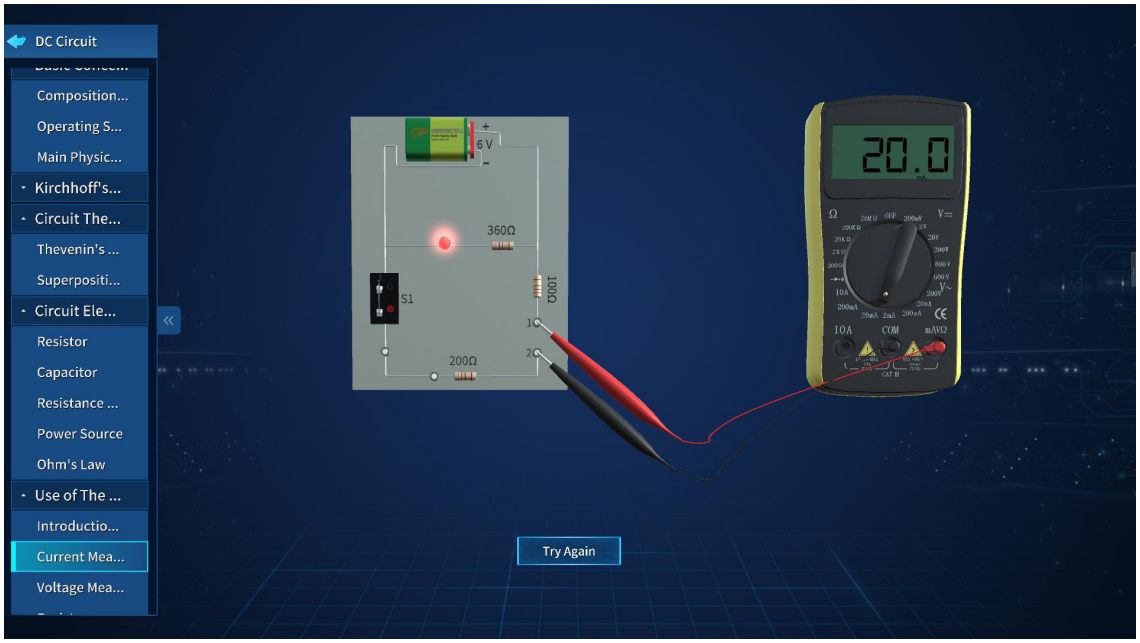

DC Circuit
Resistor
Characteris...
Common Resi...
Cascade Con...
Parallel Re...
Mixed Conne...
Capacitor
Capacitor C...
Common Capa...
Cascade & P...
Capacitor c...
Inductance
Please check the correct points to connect to complete the cascade connection.
The characteristics of circuits with capacitors in the cascade connection are:
1. The amount of charge on
C1
C2
Cascade Connection
Parallel connection


DC Circuit
Resistor
Characteris...
Common Resi...
Cascade Con...
Parallel Re...
Mixed Conne...
Capacitor
Capacitor C...
Common Capa...
Cascade & P...
Capacitor c...
Inductance
Please check the correct points to connect to complete the cascade connection.
The characteristics of circuits with capacitors in the cascade connection are:
1. The amount of charge on
C1
C2
Cascade Connection
Parallel connection

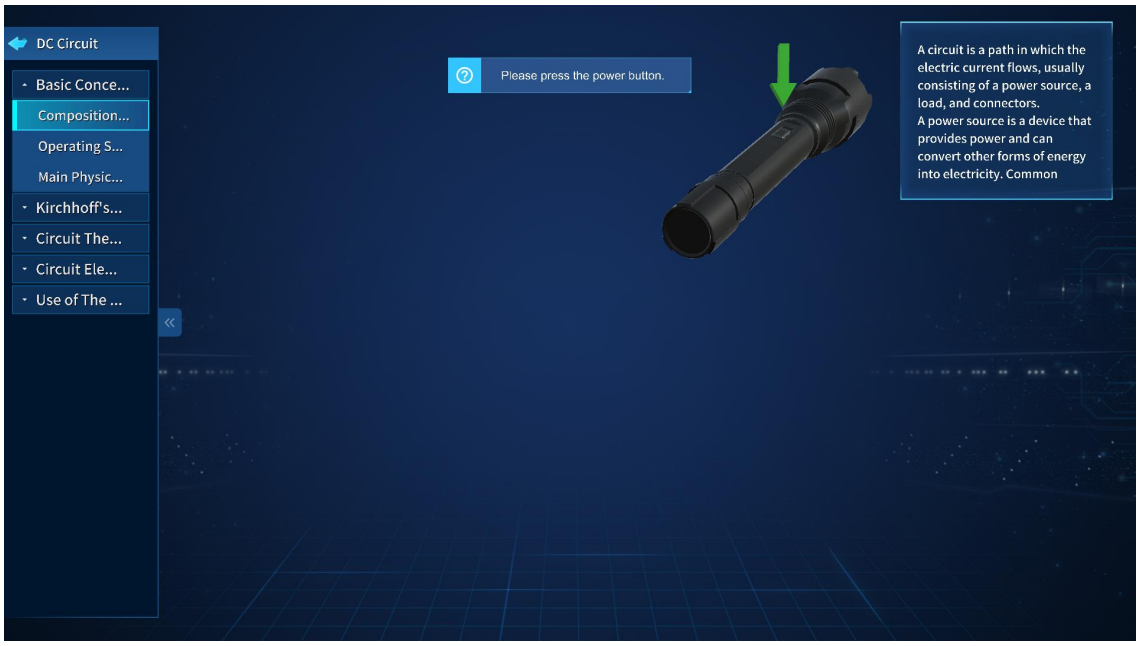
(6) Click Measure, drag the red and black test pens of the multimeter to the end pins of the part to be measured, and click Reset to re-measure.

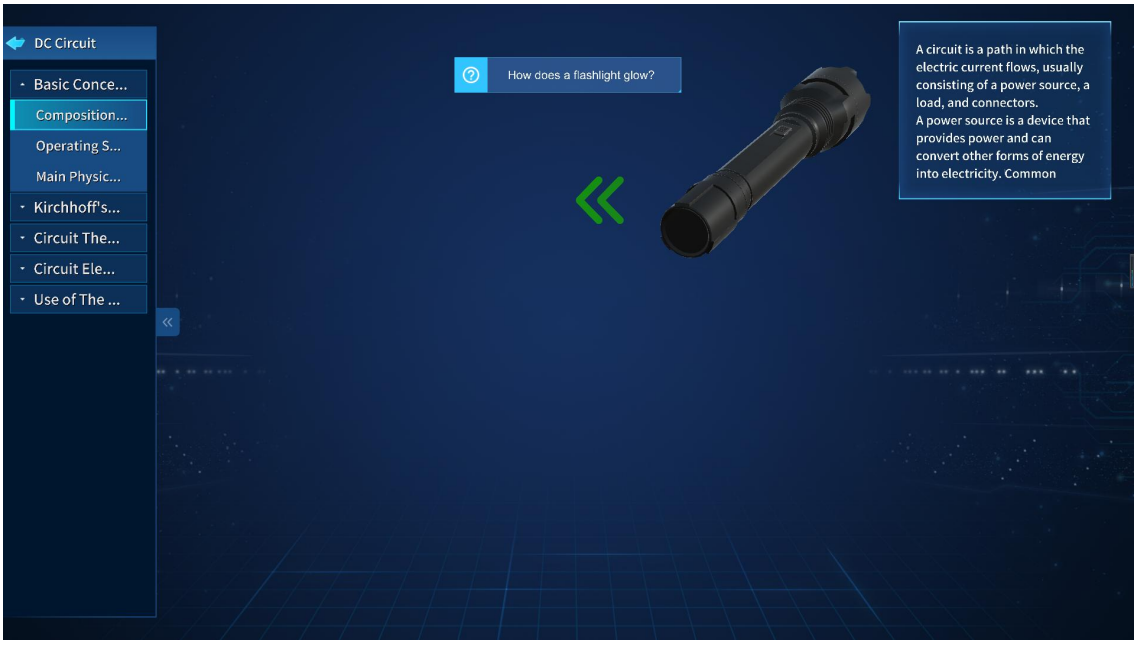






(7) Operate according to the text description and the instruction arrow.




DC Circuit
Basic Conce...
Composition...
Operating S...
Main Physic...
Kirchhoff's...
Circuit The...
Circuit Ele...
Use of The ...
How does a flashlight glow?
A circuit is a path in which the electric current flows, usually consisting of a power source, a load, and connectors.
A power source is a device that provides power and can convert other forms of energy into electricity. Common

DC Circuit
Basic Conce...
Composition...
Operating S...
Main Physic...
Kirchhoff's...
Circuit The...
Circuit Ele...
Use of The ...
What is a pictorial circuit diagram for a flashlight?
Switch
Lamp
Dry-cell Battery
Shell
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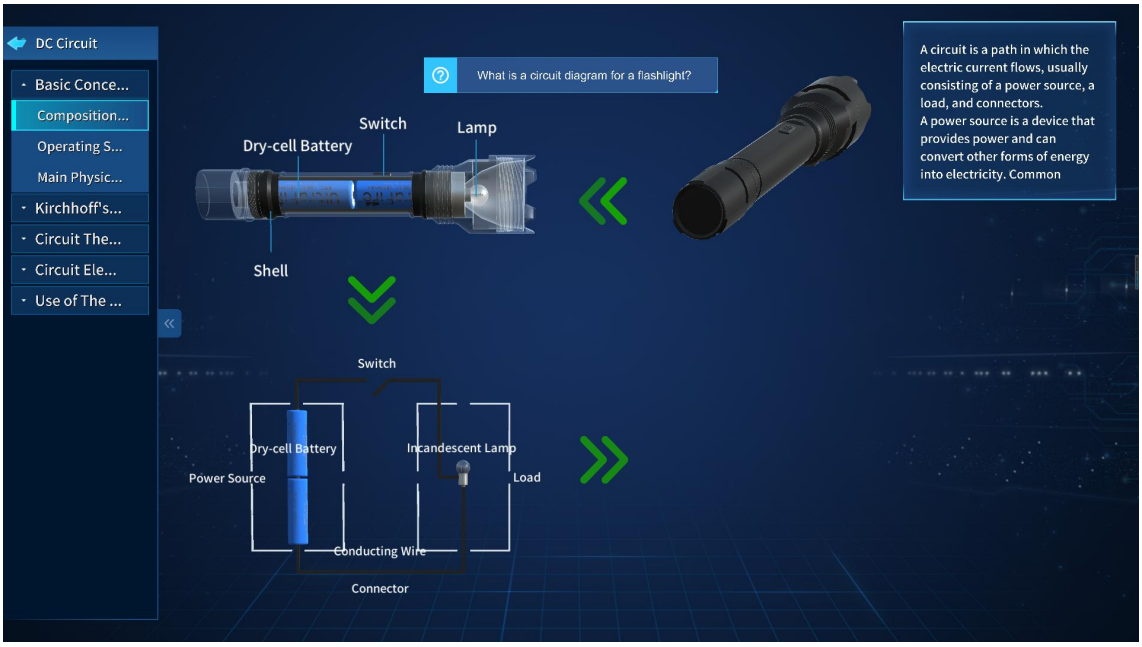
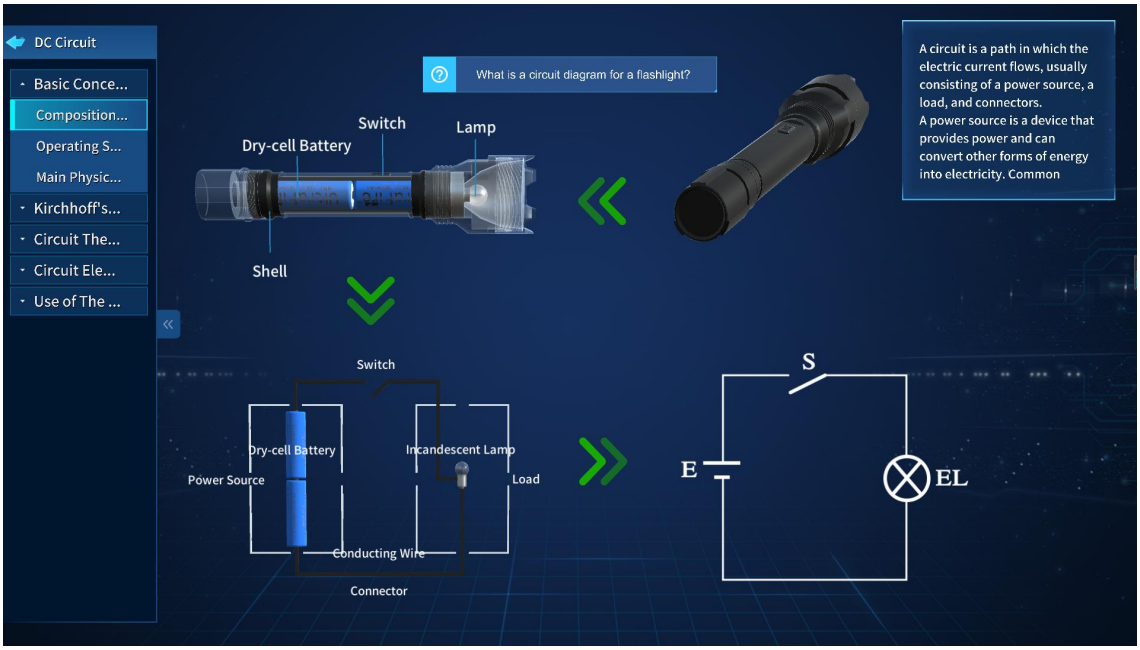
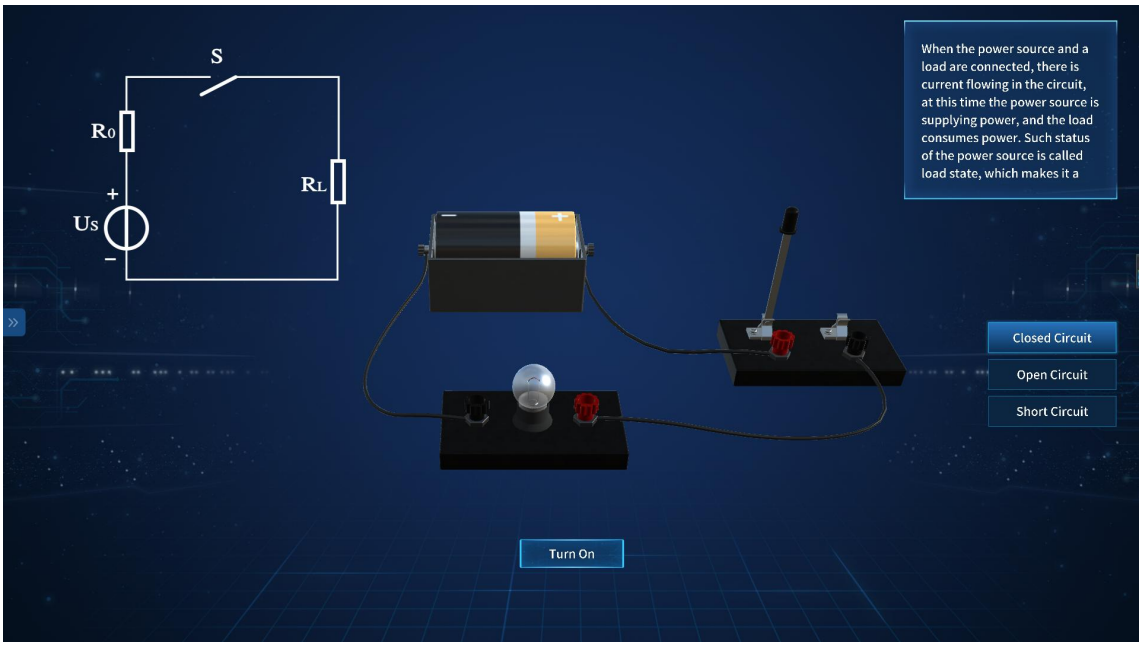
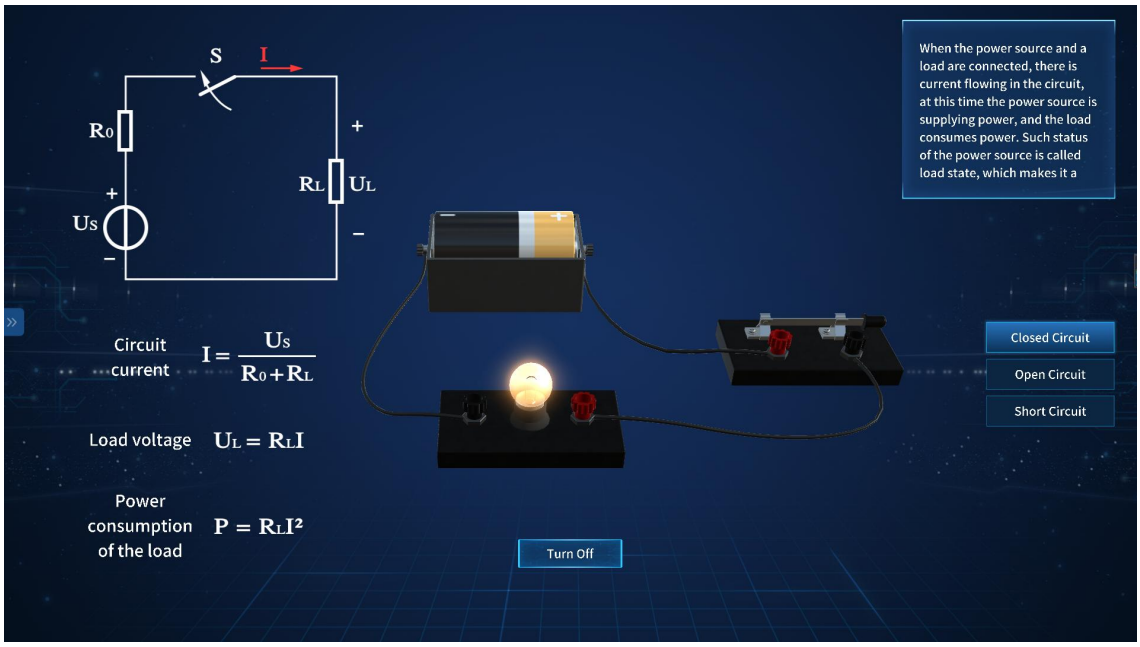
A power source is a device that provides power and can convert other forms of energy into electricity. Common


DC Circuit
Basic Conce...
Composition...
Operating S...
Main Physic...
Kirchhoff's...
Circuit The...
Circuit Ele...
Use of The ...
What is a circuit diagram for a flashlight?
Switch
Lamp
Dry-cell Battery
Shell
Switch
Dry-cell Battery
Incandescent Lamp
Power Source
Load
Conducting Wire
Connector
A circuit is a path in which the electric current flows, usually consisting of a power source, a load, and connectors.
A power source is a device that provides power and can convert other forms of energy into electricity. Common

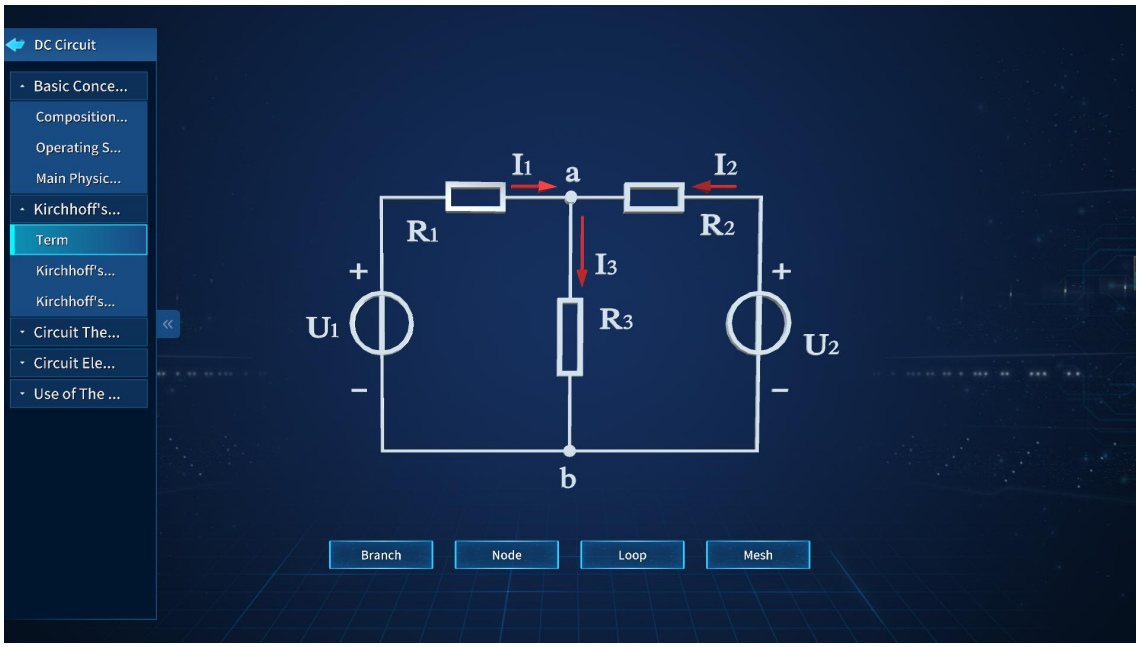


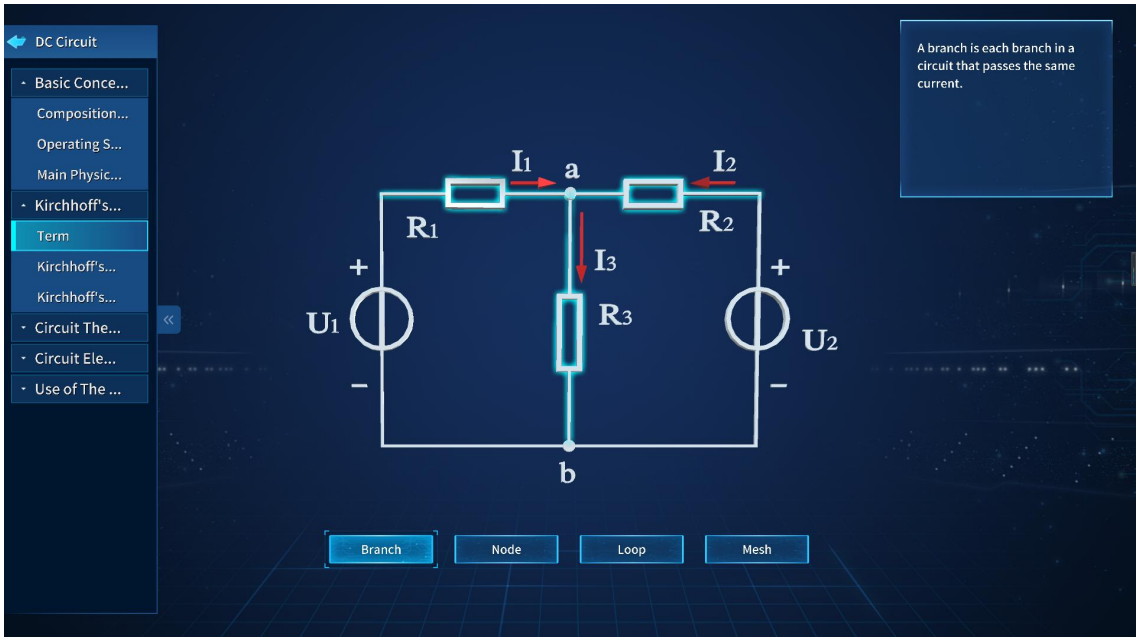
(8) Click the button to control the on-off of the circuit.



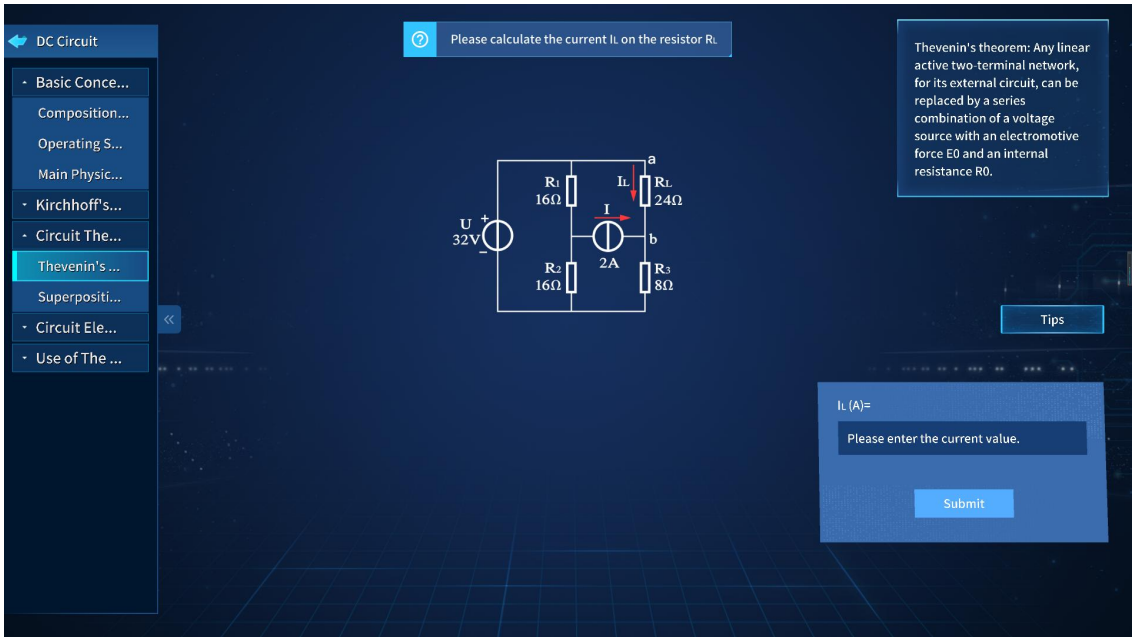


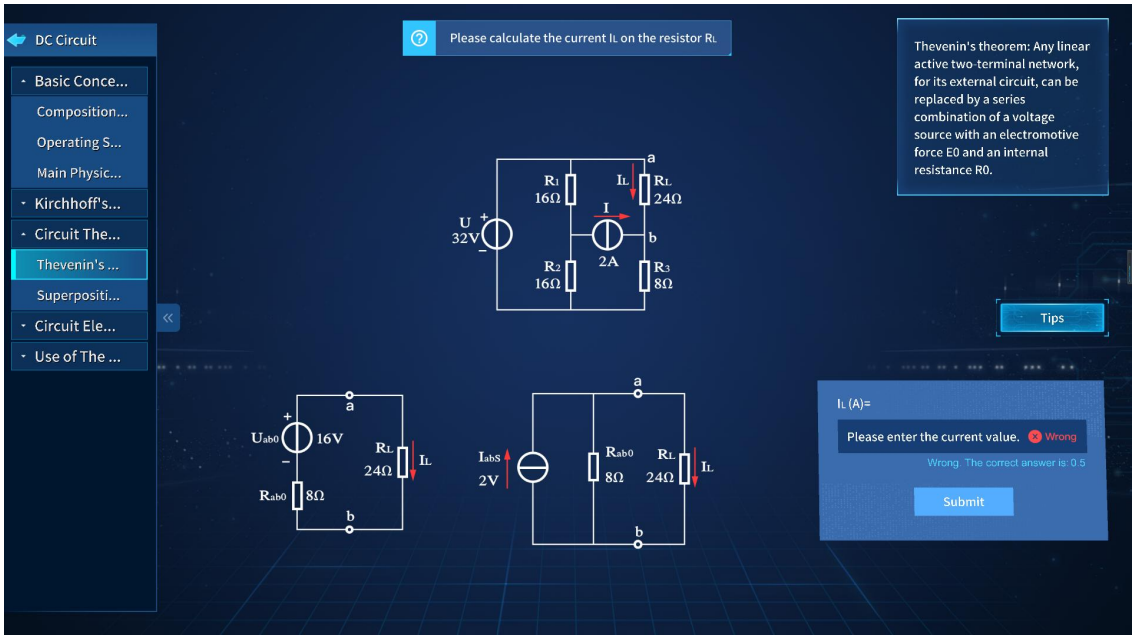
(9) Click the button, the relevant part will be highlighted and flashed.



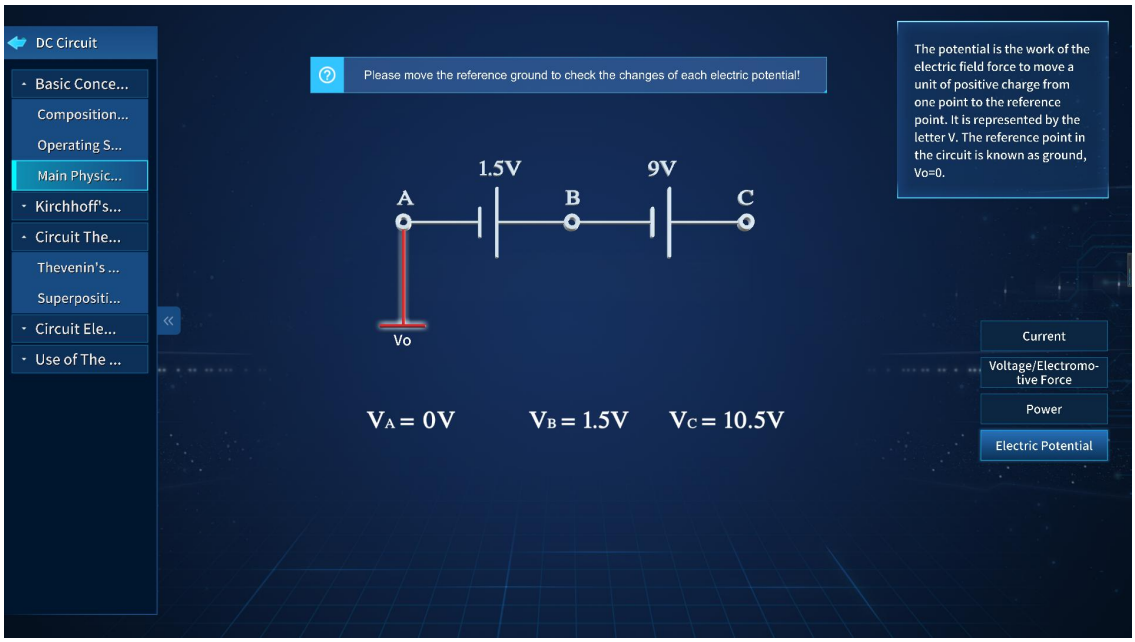


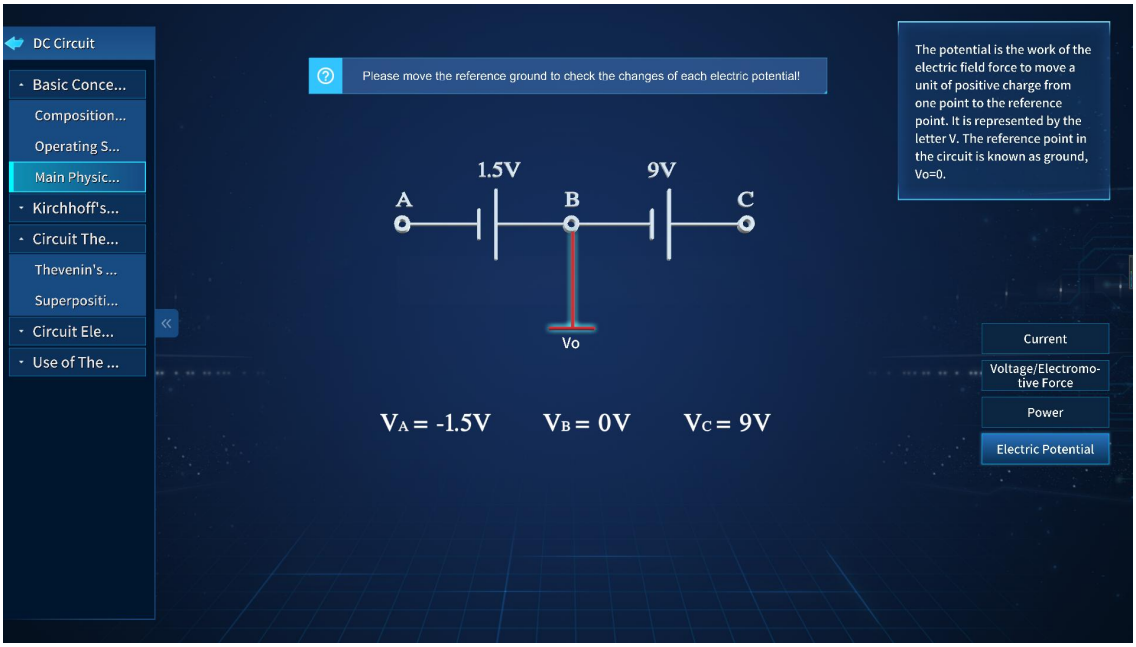
(10) Calculate according to the text prompt, you can click the prompt to assist the calculation.





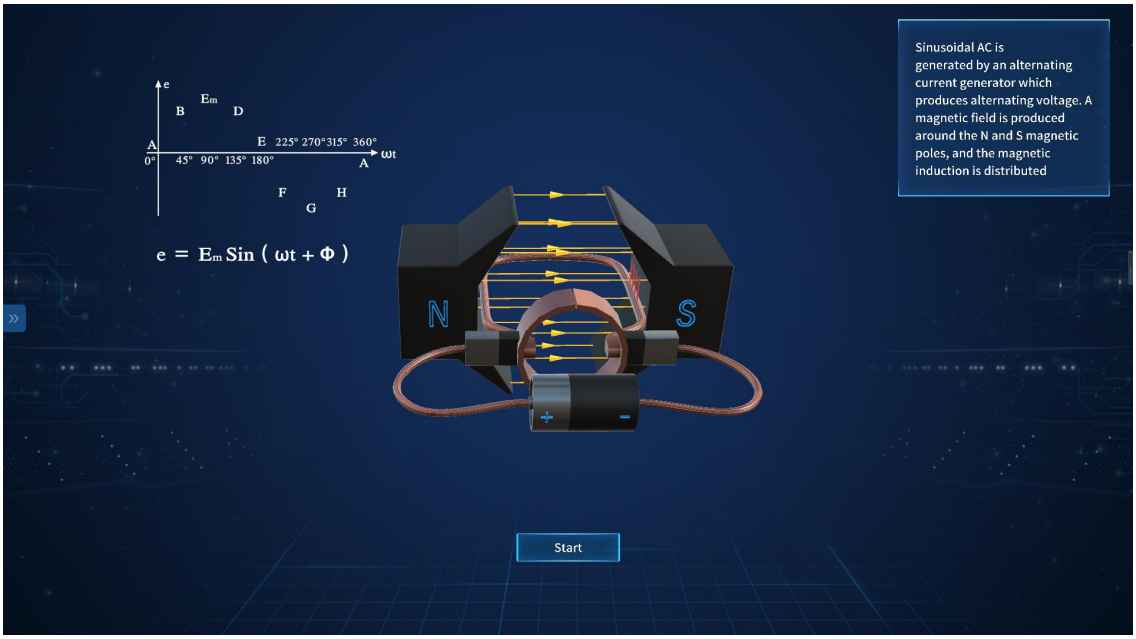
(11) Drag the highlighted object according to the text prompt.

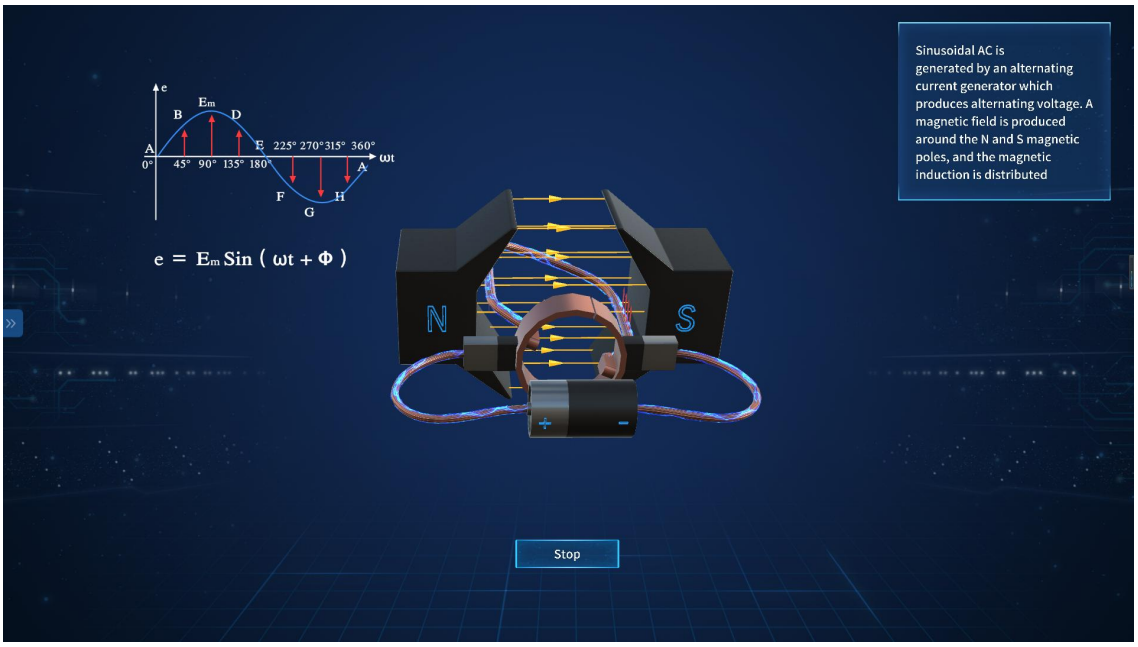




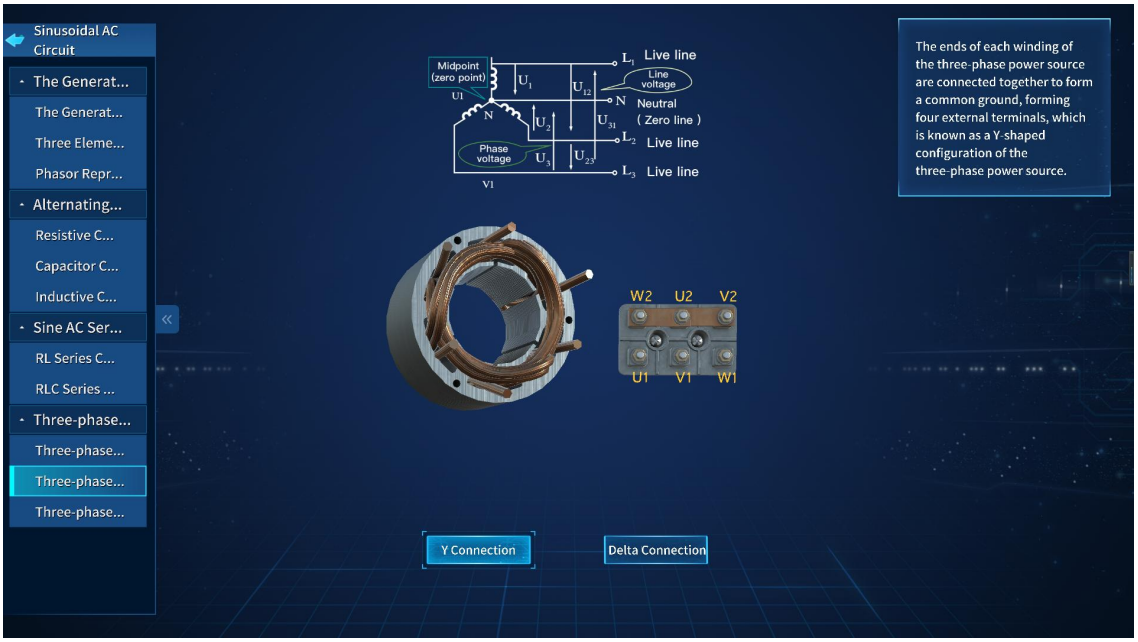
Sinusoidal AC circuit module

(12) Click on the UI to display the content.



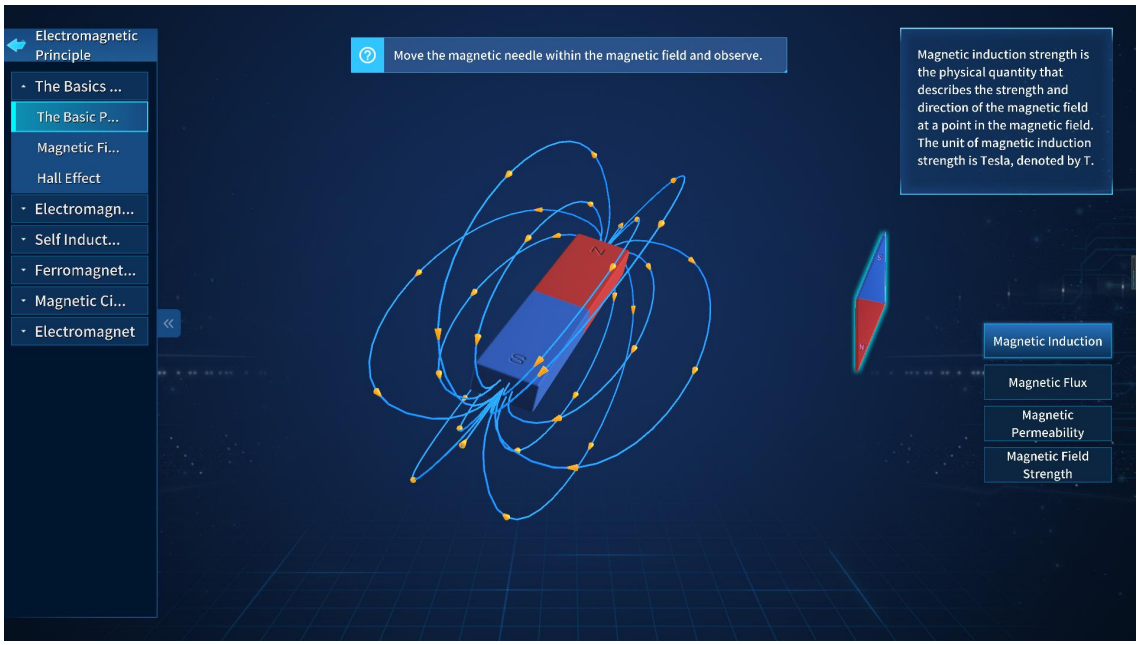


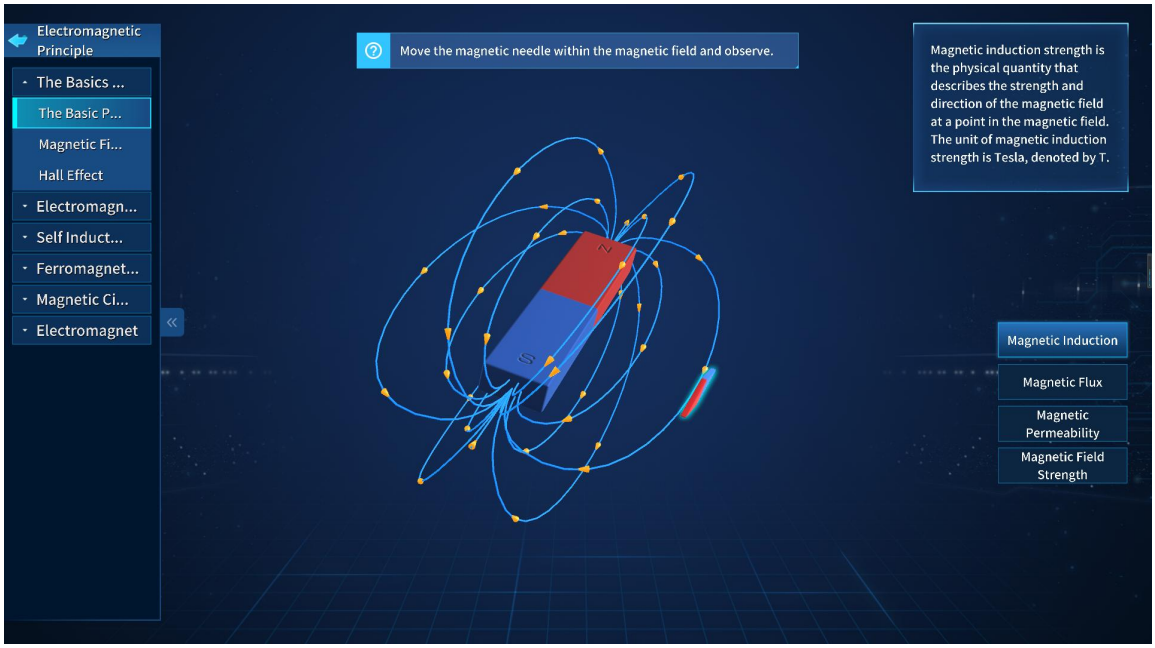
(13) Click on the UI to play the content animation.



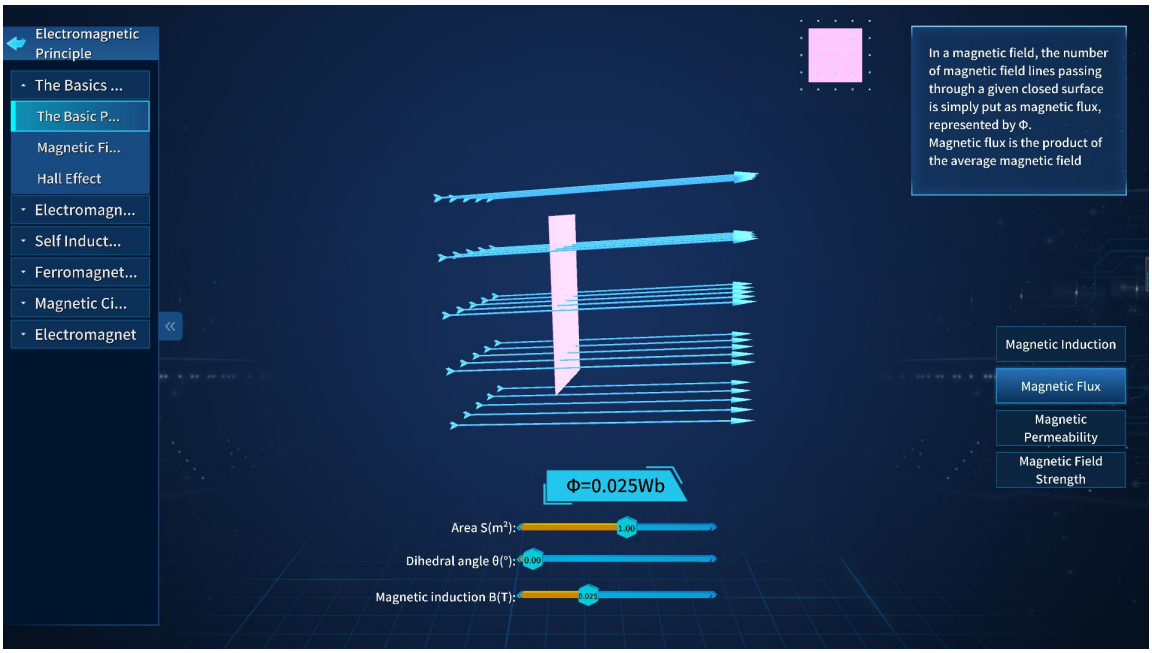
Electromagnetic principle module

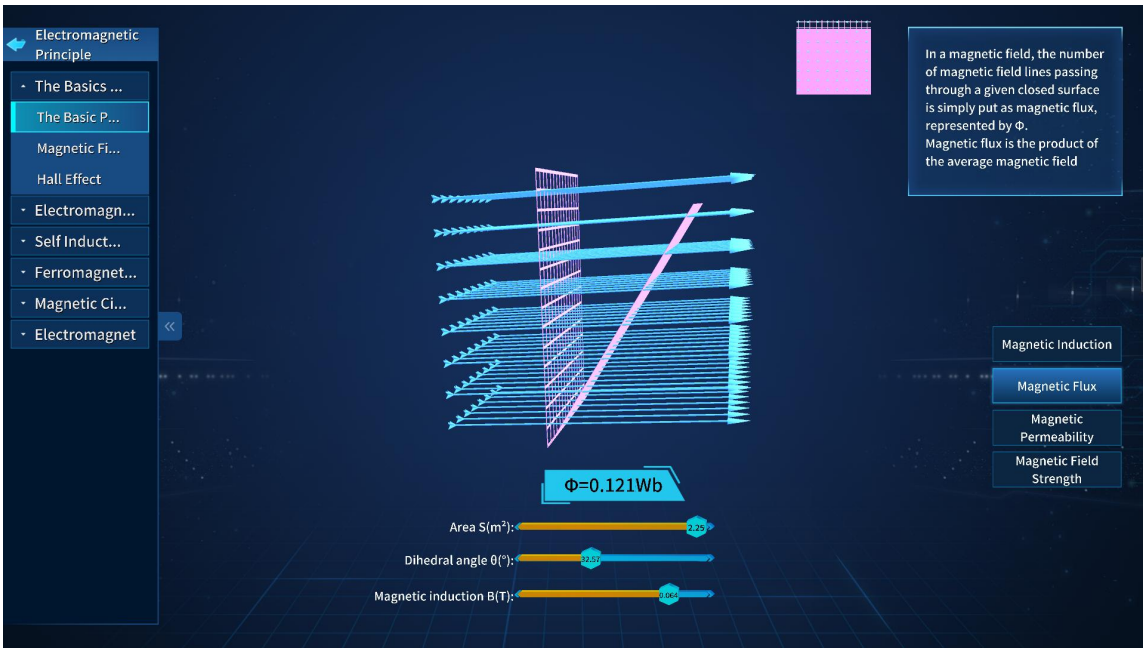
(14) Drag the highlighted object to the target position according to the text prompt, you can drag multiple times.



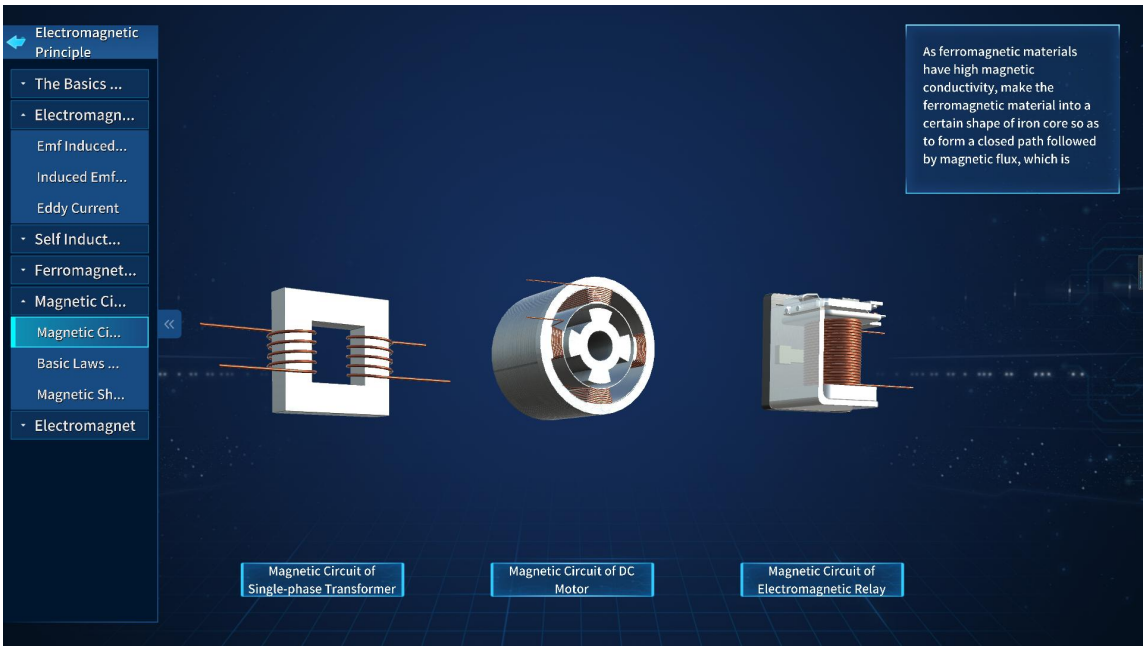


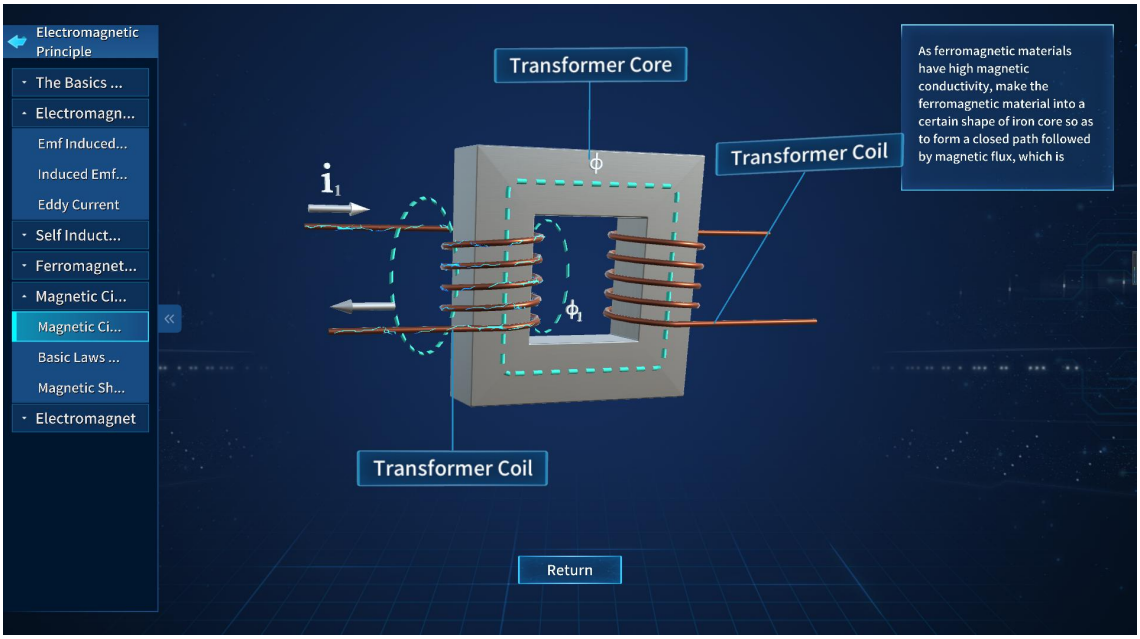
(15) Drag the value bar of the parameter, the corresponding parameter of the model will change.





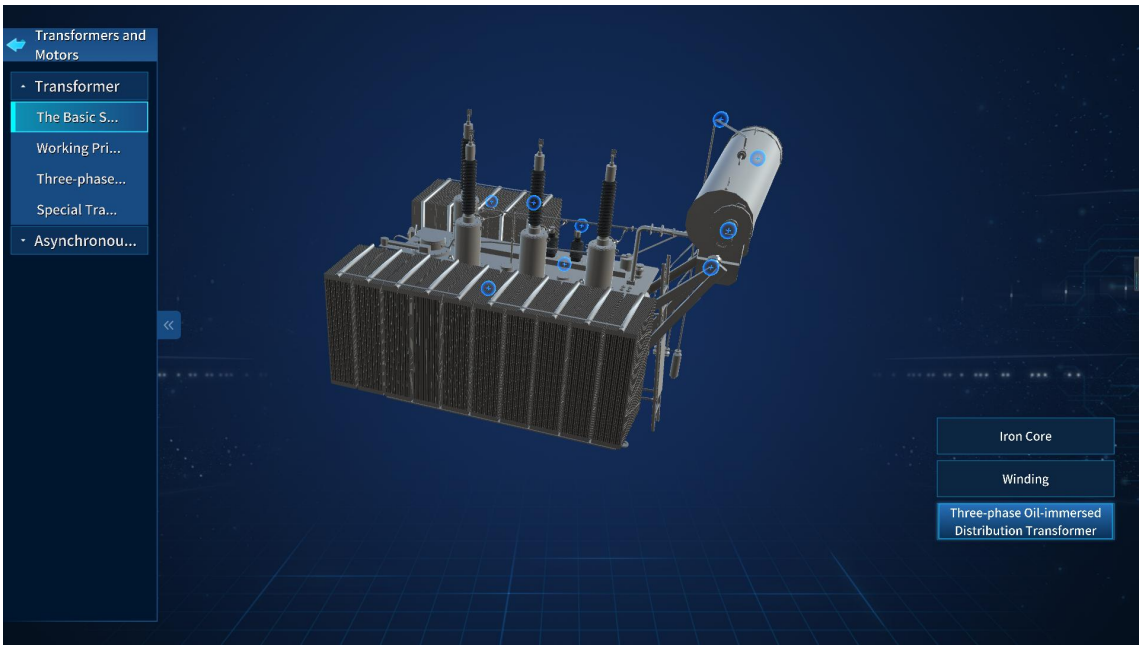
(16) Click the button to zoom in and play the animation.





Transformer and motor module

(17) A label appears near the blue ball, with a corresponding explanation in the upper right corner.



(18) Click to explode, the model will explode into multiple parts, the ray pen is close to a single part, and the name of the part is displayed. You can drag the parts individually, and click to move as a whole to drag the model as a whole.

Transformers and Motors
Transformer
The Basic S...
Working Pri...
Three-phase...
Special Tra...
Asynchronou...
Single-phas...
Three-phase...
Three-phase Asynchronous Motor
Single-phase asynchronous motors are a type of drive motors powered by single-phase AC power supplies. Its power is small, generally power between a few watts to several hundreds of
Explode
Principle

Transformers and Motors
Transformer
The Basic S...
Working Pri...
Three-phase...
Special Tra...
Asynchronou...
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Explode
Principle

Transformers and Motors
Transformer
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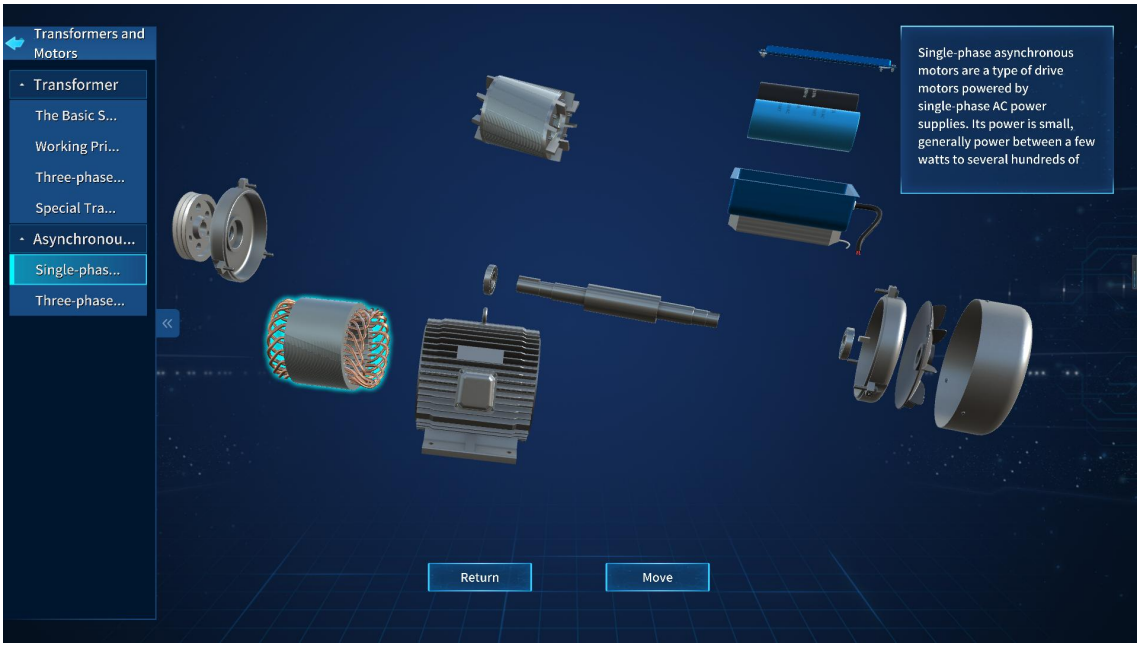
Asynchronou...
Single-phas...
Three-phase...
Single-phase asynchronous motors are a type of drive motors powered by single-phase AC power supplies. Its power is small, generally power between a few watts to several hundreds of
Return
Move



5 Troubleshoot Problems

Problem1: zSpace stylus ray cast may divert in use. It can be fixed by moving the stylus pen close to the screen.

Problem2: When an object is moved wherever out of sight and cannot be interacted with, click the left stylus button to restore the placement of objects.

Problem3: This software can work only after it is registered. So please contact the research center of Jiangxi KMAX Industrial Co., Ltd. to acquire a activation code.

Problem 4: When connected to a second display, if the software screen is not displaying in full screen view, do as follows: turn off the software, right-click the mouse on the desktop to enter the Display settings, and in the Multiple Displays section, select Extend. Designate zSpace the primary monitor and restart the software.